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IN THE

Supreme Court of the United States

STATE OF MICHIGAN, *et al.*,
Petitioners,

and

UTILITY AIR REGULATORY GROUP,
Petitioner,

and

NATIONAL MINING ASSOCIATION,
Petitioner,

v.

ENVIRONMENTAL PROTECTION AGENCY, *et al.*,
Respondents.

ON WRITS OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

BRIEF OF RESPONDENTS AMERICAN ACADEMY OF PEDIATRICS, *ET AL.*

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QUESTION PRESENTED

Whether the Environmental Protection Agency unreasonably refused to consider costs in determining whether it is appropriate to regulate hazardous air pollutants emitted by electric utilities.

RULE 29.6 STATEMENT

Respondents American Academy of Pediatrics, American Lung Association, American Nurses Association, American Public Health Association, Chesapeake Bay Foundation, Citizens for Pennsylvania's Future, Clean Air Council, Conservation Law Foundation, Environment America, Environmental Defense Fund, Izaak Walton League of America, National Association for the Advancement of Colored People, Natural Resources Council of Maine, Natural Resources Defense Council, Ohio Environmental Council, Physicians for Social Responsibility, Sierra Club, and Waterkeeper Alliance, all of which were respondent-intervenors in the court of appeals, are nonprofit public interest organizations. None of them has any corporate parent, and no publicly held corporation owns an interest in any of them.

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INTRODUCTION

EPA's Air Toxics Rule limits emissions of hazardous air pollutants from coal- and oil-fired electric generating units ("EGUs" or, colloquially, power plants). These units annually emit large amounts of many different pollutants designated by Congress as "hazardous" under the Clean Air Act, including arsenic, cadmium, chromium, hydrochloric acid gas, hydrogen cyanide gas, mercury, nickel, and selenium. Power plants' emissions of mercury and several other toxics dwarf those of the next-largest source categories (and, in some cases, far exceed emissions from all other sources combined). The respondent public health, medical professional, environmental, civil rights, and conservation organizations intervened below to support the Rule because it will greatly reduce *overall national emissions* of mercury and other dangerous air toxics, thereby securing major, long-delayed gains for public health.

Based on a voluminous record assembled over two decades, EPA concluded that regulation of power plants' toxic pollution was "appropriate and necessary" within the meaning of 42 U.S.C. 7412(n)(1)(A) and promulgated emissions standards at levels that scores of such plants were already meeting. That decision was lawful. EPA reasonably concluded that the term "appropriate" in subparagraph 7412(n)(1)(A) did not implicitly require consideration of the costs of complying with emissions standards as part of the Agency's threshold decision whether to regulate power plants.

The term "appropriate" is context-dependent, and EPA reasonably read it here to respect, rather than

override, the statute of which it is a part, including its explicit constraints on when, where, and how costs fit in the regulatory process. Subparagraph 7412(n)(1)(A), with its direction to EPA to prepare and consider a scientific study of "hazards to public health," as well as its context in section 7412, powerfully support EPA's decision not to address costs at the threshold stage of deciding *whether* to regulate, but instead to address costs within the feasibility-based standard-setting framework that embodies Congress's judgment as to *how much* of a regulatory burden to impose.

The 1990 Congress that enacted the provision, intent on reducing toxic emissions after decades of regulatory paralysis, manifestly believed it *in*appropriate to consider costs at the threshold stage; it provided, for source categories spanning the entirety of the industrial economy, for costs to be instead considered, in a carefully described manner, in the setting of emissions standards. Petitioners' unguided standard would be entirely alien to the Act—which consistently requires EPA to take costs into account when setting standards, but not when determining whether to regulate particular sources.

EPA did just what subparagraph 7412(n)(1)(A) told it to do (albeit far more slowly than Congress directed): The Agency conducted an exhaustive study of power plants' emissions of hazardous air pollutants, and identified numerous hazards that were attributable specifically to those emissions and that persisted, contrary to some predictions in 1990, despite implementation of other statutory requirements. Power plants remain huge emitters of

numerous congressionally designated toxics, including ones that cause permanent neurological impairment, birth defects, and cancer. EPA afforded power plants the special, pre-listing evidentiary inquiries that subparagraph 7412(n)(1)(A) called for, and the Agency properly followed the record evidence in deciding to regulate power plant emissions.

STATEMENT

The Clean Air Act provides for the control of "hazardous air pollutants" ("HAPs"): airborne toxics, such as mercury, arsenic, cadmium, hydrochloric acid, and hydrogen cyanide. 42 U.S.C. 7412. Congress singled out these pollutants for their "potent" and "especially serious health risks," even in relatively small quantities, Legis. History of the Clean Air Act Amendments of 1990 (Cong. Research Serv. 1993) ("Leg. Hist.") at 2,522 (explaining difference between "hazardous air pollutants" and "criteria pollutants" addressed elsewhere in the Act) (House Debate). 42 U.S.C. 7412(b)(1) (list of pollutants). Those risks include "birth defects, damage to the brain or other parts of the nervous system, reproductive disorders, and genetic mutations," as well as cancer. Leg. Hist. at 2,524 (House Debate). *See* 42 U.S.C. 7412(b)(2) (air toxics may be, *inter alia,* "carcinogenic, mutagenic, teratogenic, neurotoxic," "cause reproductive dysfunction," or "acutely or chronically toxic").

A. The History of Section 7412

Congress first sought to address air toxics by charging EPA to identify which substances posed harms worthy of regulation, and the level of regulation that would address those risks. *See* 42 U.S.C. 7412(a)(1), 7412(b)(1) (1970). That regime "worked poorly," largely because EPA was unable to adequately balance the health risks of air toxics against the regulatory burdens of reducing them. Leg. Hist. at 8,468 (S. Rep. No. 101-228 ("Senate Report")). Over nearly 20 years, EPA "regulated only some sources of seven chemicals." *Id.* *See id.* at 3,175 ("No decision—is the history of this program") (H. Rep. 101-490 ("House Report")).

As a result, in 1990, Congress completely revised section 7412. Noting EPA's two-decade failure to promulgate sufficiently protective standards, Congress rejected proposals that would have entrusted EPA with the discretion to balance "health and economic considerations" against each other. Leg. Hist at 8,746-47 (EPA would "fail[] to protect public health" in such balancing) (Sen. Lautenberg). That rejection reflected the special regulatory difficulties Congress saw as particular to the nature of air toxics: "[t]he public health consequences of substances which express their toxic potential only after long periods of chronic exposure will not be given sufficient weight in [a] regulatory process when they must be balanced against the present day costs of pollution control and its other economic consequences." Leg. Hist. at 8,522 (Senate Report).

B. Section 7412's Regulatory Process

Congress consequently enacted a highly structured regulatory framework, with strict, non-discretionary standards, meant to avoid the "simultaneous balancing of costs and benefits" of which EPA had proved incapable. *Id.* at 8,518 (Senate Report).

First, Congress no longer relied on EPA to identify pollutants whose harms justified regulation. Instead, Congress itself created an initial list of 189 hazardous air pollutants. 42 U.S.C. 7412(b). EPA must review the list periodically and revise it where "appropriate." *Id.* 7412(b)(2). Whether such revisions are "appropriate" depends entirely on whether emissions of a given pollutant "may reasonably be anticipated to cause adverse effects to human health or adverse environmental effects," without regard to the costs of controlling the pollutants. *Id.* 7412(b)(3)(B)-(C).

Second, Congress added provisions requiring EPA to regulate specific sources of the congressionally identified hazardous pollutants. Congress directed EPA to list for regulation all categories of sources whose emissions exceeded specific numeric thresholds, without consideration of costs. 42 U.S.C. 7412(c)(1) (requiring EPA to list "all categories and subcategories of major sources"); *id.* 7412(a)(1) (providing thresholds for major sources). Congress further provided that source categories may only be removed from the list based upon a demonstration that the health or environmental harms resulting from their emissions fall below a specific threshold, or are absent altogether. *See id.* 7412(c)(9).

The third step of the regulatory process requires EPA to promptly promulgate, for each listed category, emission standards reflecting the "maximum degree of reduction in emissions" of air toxics that is "achievable," considering—among other factors—costs. 42 U.S.C. 7412(d)(2). *See also id.* 7412(c)(2) & 7412(c)(5) (requiring standards within two years of listing a source category).

Fourth, after those technology-based standards are in place, EPA must promulgate "residual risk" standards, to ensure "an ample margin of safety to protect public health." 42 U.S.C. 7412(f)(2)(A). Once it ensures public health is thus protected, EPA may issue "more stringent" standards, considering compliance costs and other factors. *Id.*

C. Subparagraph 7412(n)(1)(A) and Power Plants

Some legislators (and industry representatives) disputed that power plants' emissions of air toxics posed a hazard to public health. *E.g.*, Leg. Hist. at 1,416 (Rep. Oxley). Alternatively, they suggested that any such problems might be cured by the Title IV Acid Rain Program—a market-based system, also adopted in the 1990 Amendments, intended to reduce emissions of sulfur dioxide and nitrogen oxides. Others urged that power plants' emissions threatened public health and that it would be "inequitable to impose a regulatory regime on every industry in America and then exempt ... a category like power plants which are a significant part of the air toxics problem." *Id.* at 871 (Sen. Durenberger).

The result was a compromise provision instructing EPA, within three years, to "perform a study of the hazards to public health reasonably anticipated to

occur as a result of emissions by [power plants] of" listed hazardous air pollutants "after imposition of the requirements of this chapter." 42 U.S.C. 7412(n)(1)(A). EPA was also required to "develop and describe" in a report to Congress "alternative control strategies for emissions which may warrant regulation under this section." *Id.* Finally, subparagraph 7412(n)(1)(A) states that:

> [t]he Administrator shall regulate [power plants] under this section, if the Administrator finds such regulation is appropriate and necessary after considering the results of the study required by this subparagraph.

The statute's ensuing subparagraphs require EPA to transmit to Congress, within four years, another study—of mercury emissions from power plants, waste incinerators, and other sources, including available control technologies and the "costs of such technologies"—and direct the National Institute of Environmental Health Sciences to provide Congress a study of the "threshold level of mercury exposure below which adverse human health effects are not expected to occur," paying special attention to "sensitive populations." *Id.* 7412(n)(1)(B)-(C).

D. EPA's Appropriate and Necessary Determination

EPA completed the required Utility Study in 1998 (nearly five years after Congress's deadline and three years after initial compliance with Phase I of the Acid Rain Program). The Utility Study assessed, *inter alia,* the hazards remaining after implementation of the Acid Rain Program, and it found that controls resulting from that program were "not expected to significantly impact on HAP emissions due to their

limited numbers, and limited HAP control efficiency improvement." JA 106-07.

Considering that study and an extensive record that also included the two other congressionally-mandated and peer-reviewed scientific studies, as well as congressionally-required National Academy of Sciences research on the toxicological effects of methylmercury, EPA concluded in 2000 that regulation of hazardous air pollutant emissions from coal- and oil-fired power plants "is appropriate and necessary." 65 Fed. Reg. 79,829 (Dec. 20, 2000).

EPA determined that it was "appropriate" to regulate coal- and oil-fired power plants because, among other reasons, their mercury emissions create a hazard to public health and the environment and because several other hazardous metals they emit pose cancer risks. *Id.* at 79,827. EPA concluded that regulation was "necessary" because imposition of other requirements of the Act had not addressed, and would not sufficiently address, these hazards. *Id.* at 79,830. EPA also found that existing technologies made it "feasible" to control power plants' air toxics. *Id.* at 79,830. Accordingly, EPA added coal- and oil-fired power plants to the subsection 7412(c) list of source categories to be regulated. *Id.* at 79,830. *See also* 76 Fed. Reg. 24,976, 24,997 (May 3, 2011).[1]

In 2005, EPA finalized a rule that purported to remove power plants from that list. 70 Fed. Reg. 15,994 (Mar. 29, 2005). That rule determined that

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[1] EPA determined that regulation of gas-fired power plants was "not appropriate or necessary" because of the "negligible" impacts of their hazardous emissions. 65 Fed. Reg. 79,831.

dangers to public health from power plants' air toxics were best addressed through an allowance-trading system under 42 U.S.C. 7411, for mercury alone, *id.* at 16,005; it was vacated in *New Jersey v. EPA*, 517 F.3d 574 (D.C. Cir. 2008), *cert. denied sub nom. UARG v. EPA*, 555 U.S. 1169 (2009).

In 2012, the Agency reaffirmed its "appropriate and necessary" determination and promulgated regulations for power plant hazardous air pollutants. 76 Fed. Reg. 24,976. Significant new scientific studies and data confirmed "serious health risks from HAP exposure" despite implementation of other Clean Air Act programs, and that power plants' toxic emissions "pose a hazard to the environment as well." 77 Fed. Reg. 9,304, 9,310-11, 9,336, 9,363 (Feb. 16, 2012); 76 Fed. Reg. 24,999, 25,016.

For example, EPA found, based on a peer-reviewed risk assessment, that power plant emissions of mercury in 2016 would cause or significantly contribute to human exposures exceeding safe levels in nearly a quarter of modeled watersheds "with populations at-risk," 77 Fed. Reg. 9,355; and that power plants were responsible for significantly higher mercury pollution in the areas nearest to them, 76 Fed. Reg. 25,013. EPA also found that non-mercury metals like chromium and nickel, emitted by power plants as particulates, pose cancer risks, *id.* at 24,978, 25,011; 77 Fed. Reg. 9,319, and that power plants continue to be a significant source of these and other toxic metals, such as arsenic and cadmium, which have serious health effects, 76 Fed. Reg. 25,003-4, 25,006 tbl. 5. *See also* 77 Fed. Reg. 9,380 (most non-mercury metallic toxics are emitted, and best controlled, as particulates). Recognizing that power

plants account for an overwhelming share of the hydrogen chloride and hydrogen fluoride emitted in the U.S. (and are significant sources of hydrogen cyanide), and that these acid gases have serious acute and chronic health effects, 76 Fed. Reg. 25,004-5, EPA expressed its concern "about the potential for [power plant] acid gas emissions to add to already high atmospheric levels of other chronic respiratory toxicants," *id.* at 25,016. *See also* 77 Fed. Reg. 9,363, 9,405-06.

EPA explained that power plants account for very large proportions of total U.S. emissions of numerous hazardous air pollutants listed in 42 U.S.C. 7412(b)(1):

> Mercury – 50 percent;
> Arsenic – 62 percent;
> Cadmium – 39 percent;
> Chromium – 22 percent;
> Hydrochloric Acid – 82 percent;
> Hydrogen Fluoride – 62 percent;
> Nickel – 28 percent; and
> Selenium – 83 percent.

77 Fed. Reg. 9,310 (percentages of total U.S. emissions in 2005 inventory). *See also id.* at 9,337 (noting that power plants remain the "predominant source" of anthropogenic U.S. mercury emissions, particularly the oxidized and particulate forms that are of "primary concern" for public health). EPA determined that power plants remained in 2012, by a wide margin, the largest emitters of numerous hazardous air pollutants. *Id.* at 9,335. EPA also reaffirmed its 2000 finding that "effective controls are available to reduce" emissions of mercury and other

hazardous pollutants from power plants. *Id.* at 9,310-11.

EPA interpreted subparagraph 7412(n)(1)(A) as requiring the Agency to assess the hazards posed by power plants' emissions of air toxics, and to decide whether other programs would adequately address any such hazard, in order to determine whether it was "appropriate and necessary" to regulate power plants' hazardous air pollution. The Agency concluded that subparagraph 7412(n)(1)(A) is best read not to predicate the threshold finding upon cost considerations. 77 Fed. Reg. 9,326-27. It relied, in part, upon the "overall structure" of the Act and of section 7412, which does "not authorize the consideration of costs in listing any source categories for regulation." 76 Fed. Reg. 24,989. EPA therefore rested its decision on identified health and environmental hazards; the large volume of hazardous emissions from power plants; the ready availability of controls to reduce those emissions; and the confirmed need for their control notwithstanding implementation of the Acid Rain Program and other Clean Air Act programs. *E.g.*, 77 Fed. Reg. 9,323-24, 9,362-64.

EPA proceeded to promulgate emissions standards for power plants pursuant to subsection 7412(d), based upon reductions that a substantial number of existing power plants were already achieving. 76 Fed. Reg. 25,041-46.

E. The Rule's Public Health Benefits

EPA explained that the Rule "will reduce emissions of all the listed HAP that come from EGUs." *Id.* at 9,444. *See id.* at 9,306 (noting that emissions of non-mercury hazardous air pollutants will "decrease dramatically" under the Rule). EPA also found that the Rule would reduce harm to those currently exposed to the highest risks, *id.* at 9,445-46, and produce "substantial health improvements for children," *id.* at 9,441.

EPA projected that the Rule will yield deep reductions in aggregate *nationwide* emissions of many of the toxics Congress listed in 42 U.S.C. 7412(b)(1), 76 Fed. Reg. 25,013-14, including a 49 percent reduction in all anthropogenic emissions of hydrochloric acid gas and a 38 percent reduction in non-mercury metal hazardous air pollutants such as arsenic, chromium, and nickel, *id.* at 25,013-15. The Rule will reduce power plant mercury emissions by 75 percent, 77 Fed. Reg. 9,424, thereby eliminating over a third of total national anthropogenic mercury emissions. 76 Fed Reg. 25,015.

EPA did not conduct a cost-benefit analysis as part of its appropriate and necessary determination, but it did examine the Rule's costs and benefits in a "Regulatory Impact Analysis," pursuant to Executive Orders 12,866 and 13,563.

EPA explained that most of the identified benefits of the rule—such as most benefits of reducing mercury pollution, and all benefits of reducing the other hazardous pollutants—could not be assigned monetary values, due to methodological and data limitations. *See* 77 Fed. Reg. 9306 (noting

"limitations and uncertainties" of monetary figures, and that "EPA could not monetize some costs and important benefits"). *See also* JA 913-23, 940-53. EPA qualitatively described many of these "important" non-monetized benefits, 77 Fed. Reg. 9,306 tbl. 2. *See* 76 Fed. Reg. at 25,050-51 (discussing health benefits from reductions in acid gases); JA 918 (unquantified health benefits of methylmercury reductions relating to "cancer, reproductive and genotoxicity" and "other neurological delays—developmental delays, memory, behavior"); JA 914-23 (enumerating categories of benefits); D.C. Cir. JA 2368-79 (discussing health harms attributable to non-mercury metal and acid gas pollutants controlled by the Rule).

EPA nonetheless concluded that even the subset of the Rule's benefits that could be monetized would many times exceed the Rule's costs, estimating total annual benefits of $33-90 billion, and costs of $9.6 billion, 77 Fed. Reg. 9305-06. Most of these "monetizable" benefits were associated with reductions in particulate matter, which contains metal hazardous air pollutants, but has health impacts extending beyond the discrete harms of those toxic metals. The Rule is expected to prevent between 4,200 and 11,000 premature deaths, 4,700 non-fatal heart attacks, and 540,000 days of work lost to asthma and other respiratory illnesses, each year. *Id.* at 9,429.

F. Court of Appeals Proceedings

Upon petitions for review filed by industry, States, and environmental groups, the court of appeals upheld the Rule in its entirety, with one judge dissenting in part. Pet. App. 1a.

SUMMARY OF ARGUMENT

Petitioners argue that EPA erred by not weighing estimated compliance costs as part of the threshold inquiry into whether it was "appropriate and necessary" to regulate power plants. Faced with the absence of any direct instruction that EPA consider costs during that inquiry, petitioners resort to a variety of ostensibly "contextual" arguments, claiming variously that paragraph 7412(n)(1), section 7412 as a whole, or the Act in its entirety, contain an implicit mandate that EPA undertake a cost-benefit assessment before finding it "appropriate and necessary" to regulate power plants. Those arguments are meritless.

Subparagraph 7412(n)(1)(A) expressly requires the Administrator to consider one factor, prior to determining the 'appropriateness' of regulation: "hazards to public health" from EGU emissions, following imposition of the Act's other requirements. The broader context of section 7412 also supports EPA's decision. It evinces Congress's central concern with public health and environmental effects, as well as congressional direction as to how, and when, costs should be considered by the Agency—not in the threshold determination *whether* particular sources should be subjected to regulation, but in the setting of emissions standards, subject to defined constraints.

EPA decision to address costs when setting emission standards, rather than when determining whether a category of sources should be regulated at all, is congruent with the structure of the Clean Air Act's other regulatory programs. In each of those programs, costs are not a consideration at the threshold when EPA decides whether to regulate

sources, but are considered during standard-setting, when the Agency decides *how much* to regulate.

EPA's interpretation gives full effect to the "appropriate and necessary" provision, emphasizing the key legislative concerns underlying subparagraph 7412(n)(1)(A): claims that EGUs' emissions did not present a health hazard, and that the Acid Rain Program established by the 1990 Amendments might eliminate any such hazard. Based on an exhaustive review, EPA found that power plants' emissions of hazardous pollutants remain an important public health hazard which would not be remedied by other provisions in the Act. That is exactly what Congress, in subparagraph 7412(n)(1)(A), asked the Administrator to address.

Finally, petitioners' claims that EPA's interpretation leads to irrational or absurd results are groundless. EPA considered costs under the standard-setting regime that Congress required for dozens of other industries, big and small. That regime does not reflect a disregard of costs, but rather the balance struck by Congress between the benefits of protecting the public from harm, and the costs to industry such protection entails. Petitioners' claims that the Air Toxics Rule itself is excessively and unreasonably costly mischaracterize the record.

By causing major overall reductions in numerous air toxics, the Rule will importantly reduce serious hazards to the public. Those hazards, the record demonstrates, are particularly acute for vulnerable groups, including children who can suffer debilitating, lifelong effects as the result of unconsented-to exposure to hazardous pollutants like mercury. *See* 76 Fed. Reg. 25,018-19. Despite

petitioners' creative efforts to define them away, the Rule's benefits to the public health are substantial, and include exactly the benefits Congress enacted the hazardous air pollution provisions to secure.

ARGUMENT

I. The Statute Provides Overwhelming Support for EPA's Conclusion That, Under Subparagraph 7412(n)(1)(A), Costs Should Not Be Considered in Determining Whether to Regulate Power Plants.

A. The Text of Paragraph 7412(n)(1) Strongly Supports EPA's Reading.

Subparagraph 7412(n)(1)(A) does not mention costs. It provides that EPA "shall" regulate power plants under section 7412 if the Administrator finds such regulation "appropriate and necessary" after considering the results of a study assessing "the hazards to public health reasonably anticipated to occur as a result of emissions by [power plants] of [listed pollutants] ... after imposition of the requirements of this chapter."

This language strongly supports EPA's view that costs should not be considered during the threshold decision whether to regulate power plants. Congress specified one factor that EPA *must* consider in deciding whether regulation of power plants is "appropriate and necessary." That factor is not costs, but "hazards to public health" from power plants' emissions of listed pollutants. Had Congress meant to *mandate* consideration of another factor, it very likely would have said so. *See Whitman v. American Trucking Ass'n*, 531 U.S. 457, 465 (2001) (because "[n]owhere are the costs of achieving [a] standard

made part of [an] initial calculation," natural reading does not compel consideration of costs); *see also Entergy Corp. v. Riverkeeper,* 556 U.S. 208, 222 (2009) (construing Clean Water Act provision's silence concerning cost "to convey ... a refusal to tie the agency's hands as to whether cost-benefit analysis should be used").

Without any statutory text directing EPA's attention to costs, petitioners are relegated to arguing that a cost-consideration mandate is imposed by the term "appropriate." They assert that, by use of that term, Congress meant to obligate EPA to consider at the initial stage "all possibly relevant factors," NMA Br. 22, which they claim necessarily include "both the costs and benefits of regulating," Michigan Br. 21. *See also* UARG Br. 32.

But the term "appropriate" has no such rigidly fixed meaning; it is "inherently context-dependent." *Sossamon v. Texas*, 131 S. Ct. 1651, 1659 (2011). *See id.* ("'specially suitable: fit, proper'") (quoting Webster's Third New International Dictionary 106 (1993)). *See also* 77 Fed. Reg. 9326 ("The term 'appropriate' carries with it the connotation of something that is 'suitable or proper in the circumstances.'") (citing New Oxford American Dictionary (2d Ed. 2005)). When one asks whether a book is appropriate for a fourth grader, or whether a black dress is appropriate for a wedding, context shows what the operative criteria are. And when we tell someone—as Congress here directed the EPA Administrator—to take some action if *she* "finds it appropriate," we are plainly calling on that person to identify and apply those criteria.

Because the term "inherently" compels attention to context, *Sossamon*, 131 S. Ct. at 1659, the common understanding of "appropriate" does not always, or even usually, require consideration of "all possibly relevant factors," NMA Br. 22, including "both the costs and benefits." Michigan Br. 21. As used in subparagraph 7412(n)(1)(A), "appropriate" is *best*—and, *a fortiori*, permissibly—read as not extending to cost. *Entergy*, 556 U.S. at 222. Indeed, section 7412 itself elsewhere uses the word "appropriate" in a manner that clearly does not contemplate consideration of costs: Paragraph 7412(b)(2) instructs EPA to make "appropriate" revisions to the list of hazardous air pollutants, considering health and environmental effects, but not costs. Congress's use of "appropriate" elsewhere in the Act further demonstrates that costs are not always a relevant concern. *See, e.g.*, 42 U.S.C. 7513(b)(1) (instructing EPA to reclassify "appropriate areas," if they "cannot practicably attain [an air quality standard] by the attainment date"); *id.* 7607(b) (suits must be brought in the "Court of Appeals for the appropriate Circuit").

This Court has emphasized that broad terms, including "appropriate," should not be construed so as to do override more specific prescriptions in carefully wrought regulatory statutes. Indeed, this Court refused to read the phrase "reasonable and appropriate" to impose an "additional and overriding requirement of cost-benefit analysis" on a statute mandating control "to the extent feasible," because such a reading would "eviscerate" the statutory feasibility standard. *American Textile Mfrs. Inst., Inc. v. Donovan* 452 U.S. 490, 513 (1981). *See also American Trucking*, 531 U.S. at 468.

Further, Congress directed that EPA "shall"—not may—regulate, and specified a single "consideration"—the health effects revealed by the study—to inform "appropriateness" (and "necessity"). That suggests a command to answer a scientific question, not, as petitioners' would have it, a grant of virtually unbounded 'policy' discretion not to regulate. *Cf.* NMA Br. 23 (asserting that statute calls for a "*policy* judgment," not a "*scientific*" determination).[2] The statute confirms that focus on science, by directing EPA's attention solely to its "study" of health hazards—not the "report [on] alternative control strategies" that subparagraph 7412(n)(1)(A) instructs EPA to provide to Congress.

The immediately following subparagraph, 7412(n)(1)(B), expressly mentions cost, describing a separate study directed to Congress covering, *inter alia*, available technologies for controlling mercury emitted from EGUs, as well as the "costs of such technologies." Congress did not instruct EPA to consider that cost-inclusive study before making the threshold decision under subparagraph (n)(1)(A)—further evidence that Congress did not require consideration of costs as a prerequisite to the threshold listing. *See Mississippi ex rel. Hood v. AU Optronics Corp.*, 134 S. Ct. 736, 742 (2014) (noting

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[2] Subparagraph 7412(n)(1)(A) employs language—"hazards to public health *reasonably anticipated* to occur"—Congress has repeatedly employed to describe "precautionary and preventive" predictive judgments (emphasis added). *See Lead Indus. Ass'n, Inc. v. EPA*, 647 F.2d 1130, 1152-55 (D.C. Cir. 1980); *Massachusetts v. EPA*, 549 U.S. 497, 506 n.7 (2007). *See also* 42 U.S.C 7412(b)(2), 7412(b)(3)(B), 7412(b)(3)(C), 7412(e)(2)(B).

significance of "disparate inclusion or exclusion" of "particular language" in the same section of the statute) (citation omitted); *Caraco Pharm. Labs., Ltd. v. Novo Nordisk A/S*, 132 S. Ct. 1670, 1682 (2012) (adverse inference created when statute used key term in "the very next subclause, enacted at the very same time"). The inclusion of costs in a separate review of mercury-controls technology, and the longer, four-year deadline for completing that study, support EPA's understanding that, for power plants, costs are relevant to the stringency of emission standards, under subsection 7412(d)—but not to the prior decision whether to regulate at all.[3]

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[3] NMA contends (Br. 32) that because EPA considered environmental effects as an alternative basis for its "appropriate and necessary" finding, the Agency should also have considered costs, because both are part of the study required by subparagraph 7412(n)(1)(B). But rather than simply "borrow[ing] from Section 7412(n)(1)(B)," NMA Br. 32, EPA based its inclusion of environmental effects on the statutory context, noting, *inter alia*, that paragraph 7412(c)(9) directs EPA "to consider adverse environmental effects when delisting source categories," strongly implying that such effects are relevant to threshold listing determinations. 77 Fed. Reg. 9,325. *See also* 42 U.S.C. 7412(a)(7) & 7412(b)(2) (requiring listing as hazardous any pollutant found to have "significant and widespread adverse effect" on wildlife or other to natural resources).

B. Section 7412 as a Whole Confirms That EPA's Interpretation Is Reasonable.

1. *Subsection 7412(b) Reflects Congress's Determination That Hazards From Listed Pollutants Warrant Regulation.*

In 1990, Congress chose to list specific pollutants—including those controlled by the Rule—because Congress itself concluded that harms from those pollutants merited regulation under subsection 7412(d)'s stringent standard-setting criteria. 42 U.S.C. 7412(b)(1). Petitioners' position is that rather than merely ascertain whether power plants' toxic emissions posed the kinds of health hazards (such as, in the case of mercury, permanent neurological damage to infants) Congress thought worthy of regulation, EPA should have undertaken its own analysis, under the guise of its "appropriate" determination, of whether regulating those hazards was good "policy." NMA Br. 23. *See* UARG Br. 26.

However, it was at least reasonable for EPA to conclude that paragraph 7412(n)(1), through the word "appropriate," directed EPA not to second-guess Congress's judgment that the hazards created by air toxics are worth regulating—but, rather, merely to determine that power plants create such significant hazards (as EPA found they did in 2000, and reaffirmed in 2011). 77 Fed. Reg. 9,334 (refusing to interpret subparagraph 7412(n)(1)(A) as "license to ignore risks that Congress determined warranted regulation for all other source categories"). Congress, in 1990, legislated a list of pollutants precisely because EPA's efforts to weigh the costs and benefits of regulating specific hazardous air pollutants had resulted in paralysis. Leg. Hist. 8,496 (Senate

Report). Congress further recognized that the unique harms posed by toxic air pollution were not easy for an administrative agency to calculate. *Id.* at 8,521 (rejecting proposals "urg[ing] discretion for [EPA] to weigh a series of factors determining the level at which acceptable risks might be set"). *See also American Trucking*, 531 U.S. at 493 (Breyer, J., concurring) ("Congress could have thought such efforts not worth the delays and uncertainties that would accompany them").

Some petitioners assert that subparagraph 7412(n)(1)(A) rested upon a congressional judgment that hazardous pollutants from power plants "are not like HAP emissions from other source categories." UARG Br. 10. But there is no basis in the statute, the record, or physical reality, for the notion that hazardous emissions from power plants are somehow less poisonous, or less worthy of abatement, than emissions of the same compounds from other large sources. The administrative record shows that, in both 2000 and 2011, power plants' emissions of air toxics were distinctive, if at all, only because their volumes vastly exceeded those from other source categories. *Supra*, pp. 9-12.

2. *Subsection 7412(c)'s Provisions for Listing and Delisting Source Categories Further Support the Reasonableness of EPA's Statutory Interpretation.*

The statutory structure Congress enacted to define the categories of sources appropriately regulated under section 7412 is centrally focused on human health and the environment. Congress directed EPA to list all categories of sources whose

emissions tonnages exceeded specific thresholds. 42 U.S.C. 7412(c)(1) (requiring EPA to list "all categories and subcategories of major sources"). It gave EPA authority to remove source categories from the subsection 7412(c) list, based solely on criteria of "adverse health effects" and "adverse environmental effects." *Id.* 7412(c)(9)(B). *See* 77 Fed. Reg. 9,327 (noting that EPA "does not consider costs in any [section 7412] listing or delisting determinations").

Subsection 7412(c), like subsection 7412(b), indicates that Congress meant the decision whether to regulate sources of hazardous air pollution to turn on health and environmental harm—not costs. Given those central concerns, Congress would not have demanded cost-consideration *sub silentio* in subparagraph 7412(n)(1)(A); the cost "factor is *both* so indirectly related to public health *and* so full of potential for canceling the conclusions drawn from direct health effects that it would surely have been expressly mentioned ... had Congress meant it to be considered." *American Trucking*, 531 U.S. at 469. That congressional design is further confirmed, as detailed below, in Congress's express instructions as to when, and how, costs should be considered, in subsection 7412(d).

3. *In Subsection 7412(d), Congress Specified When and How EPA Is to Consider Costs When Regulating Under Section 7412.*

a. Subsection 7412(d) Provides for Consideration of Costs, Expressly and in a Particular Manner.

Subsection 7412(d) includes—exactly as petitioners suggest it should—costs as a consideration when EPA sets "*emissions standards*." UARG Br. 27 (emphasis added). *See also* Michigan Br. 30-31 (suggesting "common-sense principle" that costs be considered "when setting standards"). That provision sets out the specific role for cost Congress deemed proper in the context of controlling toxics known or suspected to cause serious, irreversible health harms to unconsenting members of the public, as well as extensive environmental damage. An additional, unbounded inquiry into "appropriate" costs would flout the constraints Congress placed on EPA's consideration of costs during the standard-setting process "under this section," 42 U.S.C. 7412(n)(1)(A).

Paragraph 7412(d)(2) sets the over-arching criteria governing EPA's standard-setting, which include "the cost of achieving" emissions reductions. It does not give EPA unconstrained authority to weigh costs; rather, it carefully defines the role costs play. Standards must reflect the "maximum reduction ... achievable," through a variety of "measures, processes, methods, systems, [and] techniques." 42 U.S.C. 7412(d)(2). And EPA must consider not only costs, but also "non-air quality health and environmental impacts and energy requirements." *Id.* This accords with how Congress has addressed costs in other standards across the Act.

Id. 7411(a)(1) ("cost" taken into account in identifying standards reflecting "the degree of emission limitation achievable through the application of the best system of emission reduction ... adequately demonstrated"); *id.* 7479(3) (standards to reflect the "maximum degree of reduction of each pollutant ... achievable" taking into account "costs" as well as other factors).

Paragraph 7412(d)(3) further places bounds, drawn from actual experience, on EPA's discretion, by requiring that standards for existing sources be no "less stringent" than the "average emission limitation achieved by the best performing 12 percent of the existing sources," *id.* 7412(d)(3)(A), of the same "class[], type[], or size[]," *id.* 7412(d)(1). That, too, is consistent with Congress's treatment of standard-setting for severe pollution problems. *See id.* 7501(3) & 7503(a)(2) (instructing EPA to base standards on reductions "achieved in practice," without any additional consideration of costs, in areas not attaining air quality standards).

Subsection 7412(d) thus instructs EPA to address costs as part of a broader analysis, subject to a clear standard of "achievable" emissions reductions. Rather than rendering section 7412 cost-blind, that treatment of costs suggests that Congress has carefully and "specifically dealt" with the role of costs in EPA's regulatory process, in a manner that EPA suitably refused to override through the broad, "general" term 'appropriate.' *RadLAX Gateway Hotel v. Amalgamated Bank,* 132 S. Ct. 2065, 2071 (2012) (citation omitted). *See id.* at 2070 (rejecting interpretation under which one clause would

"permit[] precisely" what other, more specific provision "proscribes") (citation omitted).

b. **Subsection 7412(d)'s Achievement-Based Criteria Represent a Deliberate Congressional Choice to Constrain the Role of Costs.**

Petitioners ask this Court to disregard the presence of costs among subsection 7412(d)'s standard-setting criteria, because that section prevents EPA from setting standards "less stringent than the emissions limitation achieved by the best performing 12 percent of the existing sources" of the same type, 42 U.S.C. 7412(d)(3)(A). *See* Michigan Br. 15-16.

But a limit on *how* EPA utilizes costs does not transform subsection 7412(d) into one that *ignores* costs. To the contrary, it demonstrates that Congress considered costs, and knowingly instructed EPA as to how costs should factor into the regulatory process—within a specific, evidence-based feasibility regime. *See Am. Textile Mfrs. Inst.*, 452 U.S. at 513 (broad reading of "appropriate" would defeat statute's specific "feasibility" standard). That minimum stringency requirement represented a deliberate congressional choice to limit EPA's "power to determine that implementation costs should moderate" air-quality standards, *American Trucking*, 531 U.S. at 468.

Subsection 7412(d)'s emphasis on reductions achieved by existing plants of the same type hardly evidences an irrational or cost-negligent regime. This very regime governs every other major industrial source of air toxics, from dry cleaners to petroleum

refineries, 40 C.F.R. 63 Subpts. M, CC. Petitioners' charge that this regulatory regime is "irrational" is an attack on the statute itself. Michigan Br. 32. *See also* UARG Br. 40.

Congress acted deliberately by embedding cost-consideration within an overall standard-setting regime that aims at securing the "maximum degree of reduction" in toxic pollution that is "achievable." 42 U.S.C. 7412(d)(2). *See* Leg. Hist. 8,509 ("Cost considerations are reflected in the selection of emissions limitations which have been achieved in practice," rather than a "cost-effectiveness or cost-benefit test") (Senate Report). Congress's decision to deem 'achievable' at least the average reductions being achieved by the best-performing twelve percent of existing plants—a group comprising nearly one out of eight currently operating plants—was also carefully considered. 42 U.S.C. 7412(d)(3). Congress reasonably concluded that reductions actually achieved by a significant portion of a source-category are unlikely to be cost-prohibitive for other plants of the same "class[],type[], and size[]," *id.* 7412(d), and that the better performers should not suffer competitive harm from investing in controls.

Finally, to the extent subsection 7412(d) raises any concerns regarding irrational expenditures, Congress "specifically dealt" with those concerns within that subsection—precluding petitioners' efforts to read those concerns into the general language of subparagraph 7412(n)(1)(A). *RadLAX*, 132 S. Ct. at 2071. Congress guarded against the possibility of "expenditures by regulated entities which secure no public health or environmental benefit," Leg. Hist. at 8,511 (Senate Report), and did

so expressly, providing that EPA "*may* consider [a health] threshold, with an ample margin of safety, when establishing emissions standards under this section." 42 U.S.C. 7412(d)(4) (emphasis added).

c. **Section 7412(d)'s Limitations on EPA's Discretion Reflect Congress's Judgment Regarding the Severity of the Health Risks Posed by Air Toxics.**

By placing costs within a broader framework that gives a central role to the reductions achieved in practice, Congress understood that it was creating a standard that would be among the Act's most stringent. *See* Leg. Hist. at 8,507 (Senate Report). That does not reflect disregard of costs; it reflects Congress's judgment that a substantial regulatory burden was "appropriate, as this program is for the control of *extremely harmful* air pollutants." *Id.* (emphasis added).

Petitioners may find standards that value public health so highly to be "silly" or "irrational." Michigan Br. 4, 40. But the text, structure, and legislative history of section 7412 demonstrate that Congress did not. *See, e.g., supra*, pp. 16-28; *see also* Leg. Hist at 3,177 (observing that toxic emissions result in "an exceptionally high level[] of risk," and that "EPA's goal is to protect the greatest number of people possible" from such risks); *id.* at 3,178 (noting that air toxics cause "serious" harm, including "birth defects, damage to the brain or other parts of the nervous system, reproductive disorders, and genetic mutations") (House Report).

In judging "appropriateness," EPA correctly hewed to the balance struck by Congress between the harms

of air toxics and the regulatory burdens of redressing those harms. Far from being blind to costs, the standard-setting process under subsection 7412(d) reflects a carefully crafted *congressional* judgment as to harms of air toxics, and the costs that should be incurred to remedy them.

It was at least reasonable for EPA to interpret the words "appropriate and necessary" in subparagraph 7412(n)(1)(A) congruently with, rather than in opposition to, the above-described constraints on EPA's discretion. Subparagraph 7412(n)(1)(A) indicates that power plants are to be regulated "under this section," demonstrating that Congress understood that the section 7412 framework—including the time and manner of cost-consideration specified by subsection 7412(d)—would govern power plants if EPA determined regulation is appropriate and necessary.

4. ***EPA's Interpretation is Consistent With Subsection 7412(f).***

Contrary to some petitioners' contention (UARG Br. 30-31), subsection 7412(f) does not suggest that Congress meant, by use of the word "appropriate" in 42 U.S.C. 7412(n)(1)(A), to demand that EPA address costs within its threshold listing for power plants.

First, subsection 7412(f)'s residual risk requirements by their terms apply only to sources that already are subject to subsection 7412(d) standards; they do not support bypassing the structured cost-consideration provided by subsection 7412(d). *See* 42 U.S.C. 7412(f)(2)(A), 7412(m)(6). Congress could readily have instructed EPA, in subparagraph 7412(n)(1)(A), to forego section

7412(d)'s technology-based standards in favor of a residual risk analysis similar to that required by 42 U.S.C. 7412(f). Instead it pointedly instructed EPA to regulate power plants "under this section," 42 U.S.C. 7412(n)(1)(A)—*i.e.*, the entirety of section 7412—rather than under subsection (f).

Second, the residual risk standards further demonstrate Congress's decision to give public health considerations primacy over cost concerns. Subparagraph 7412(f)(2)(A) allows EPA to consider costs, *only* in determining whether to set standards *more stringent* than those "necessary" to "provide an ample margin of safety to protect public health."[4] *See* Leg. Hist. at 8,518 (EPA is to address "questions of cost and feasibility only after a protective health and environmental standard has been defined") (Senate Report). Congress imposed that public-health standard specifically to avoid empowering EPA to "balanc[e] ... the adverse health effects ... against the costs that would be imposed," in recognition of EPA's

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[4] *NRDC v. EPA*, 824 F.2d 1146, 1163 (D.C. Cir. 1987) (en banc) (cited in Michigan Br. 28-29), addressed the pre-1990 provision similarly requiring EPA to regulate air toxics with an "ample margin of safety to protect the public health," 42 U.S.C. 7412(b)(1)(B) (1982). The court held that, under that provision, EPA "cannot under any circumstances consider cost and technological feasibility ... [during] the preliminary determination of what is safe," 824 F.2d at 1165, and recognized that, even in setting standards beyond that health-based standard, EPA could adopt an approach in which costs would not be considered, *id.* at 1165-66 & n.11. If relevant here, *NRDC* thus supports EPA's decision not to base its threshold listing decision on costs.

demonstrated inability to effectively accomplish such balancing. *Id.* at 8,517-8.

C. The Clean Air Act as a Whole Confirms That EPA's Interpretation is Reasonable.

Subparagraph 7412(n)(1)(A)'s treatment of costs, as understood by EPA, is congruent with Congress's treatment of costs elsewhere in the Clean Air Act. When the Act calls upon EPA to decide *whether* to regulate either a particular pollutant, or particular sources of pollution, it invariably directs the Agency's attention to public health and welfare—not costs. Rather, the Act uniformly introduces costs as a consideration only during the standard-setting process, when EPA decides *how stringently* to regulate.

The Act does not, for example, make costs a permissible—let alone mandatory—consideration when EPA decides whether to regulate a given pollutant. *See, e.g.*, 42 U.S.C. 7408(a)(1)(A) (air quality criteria, based on danger to public health or welfare); *id.* 7545(c) (fuel additives; "endanger[ment]" standards). Likewise, the Act does not instruct EPA to consider costs when it decides whether to regulate particular sources of pollution. Rather, it provides that sources are to be regulated based upon the harms they pose to public health and the environment. *See, e.g.*, *id.* 7411(b)(1)(A) (requiring EPA to regulate any source category causing "air pollution which may reasonably be anticipated to endanger public health or welfare"); *id.* 7475(a) & 7479(1) (requiring EPA to regulate all sources emitting more than specified quantities of pollutants); *id.* 7503(a) (subjecting sources to non-attainment permitting program without consideration of cost); *id.* 7521 (threshold

decision to regulate motor vehicles based on "public health or welfare," not costs); *id.* 7571 (threshold decision to regulate aircraft engines depends upon "public health and welfare," not costs).

Where the Act directs EPA to consider costs, it does so with respect to the standard-setting process, when the Agency decides *how stringently* to regulate pollution sources. *E.g.*, 42 U.S.C. 7411(a)(1) (including "cost of achieving such reduction" as part of standard-setting for new stationary sources); 7479(3) (including "economic impacts and other costs" as part of standard-setting under Prevention of Significant Deterioration regime). And even when setting source-specific standards, the Act does not free EPA to decide what costs might be "appropriate"; rather, it imposes feasibility or other constraints to guide EPA's decision-making. *See, e.g.*, 7411(a)(1) (standards to reflect "best system of emission reduction ... adequately demonstrated"); 7479(3) (standards to reflect the "maximum degree of reduction of each pollutant ... achievable").[5]

When UARG asserts (Br. 27) that "every provision of the act that authorizes EPA to address the establishing of *emissions standards* for specific sources includes costs as a standard-setting consideration," it conflates two different decisions: (a)

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[5] EPA's understanding of the Act's "good neighbor" provision, upheld in *EPA v. EME Homer City Generation Co.*, 134 S. Ct. 1584 (2014), is consistent with this Act-wide pattern. In *Homer City* EPA considered costs in "allocat[ing] among multiple contributing upwind States," so as to more efficiently meet (not to weaken) health-based air quality standards, *id.* at 1604, 1606-7.

threshold decisions about whether to subject "specific sources" to regulation, analogous to subparagraph 7412(n)(1)(A); and (b) standard-setting decisions to establish emissions limitations applicable to those sources, such as decisions under subsection 7412(d) (which does include costs).

EPA's interpretation of subparagraph 7412(n)(1)(A), as designating a threshold decision in which costs are not a proper factor, is congruent with the whole Clean Air Act. Petitioners' interpretation would, in contrast, result in an aberrant regime, requiring EPA to assess costs at a stage at which the Act uniformly excludes costs from consideration, and according to a standard found nowhere in the Act (nor, for that matter, anywhere in petitioners' briefs).

II. EPA Has Given Full Effect to Subparagraph 7412(a)(1)(A).

Petitioners complain that EPA's reading of subparagraph 7412(n)(1)(A) fails to respect "the fundamental differences in the respective regulatory regimes" governing power plants and other sources, NMA Br. 35, and that, if Congress had regarded the identification of health hazards as sufficient to warrant regulation, "there would have been no need" to enact subparagraph 7412(n)(1)(A), Michigan Br. 39. These arguments are meritless.

Subparagraph 7412(n)(1)(A) embodied a compromise. Some legislators were moved by industry arguments that power plants' emissions of hazardous air pollution either did not pose health problems, Leg. Hist. 872 ("[Industry] argued that mercury isn't much of an environmental problem.") (Sen. Durenberger); *id.* at 779 (regulating power

plants' mercury emissions "could not be sustained by the scientific facts") (Sen. Burdick); *id.* 1,416 ("health risks from emissions of hazardous air pollutants from powerplants is vanishingly small") (Rep. Oxley); or that any such dangers might be eliminated as an incidental benefit of other pollution control programs, especially the new Title IV Acid Rain Program, *id.* at 1,415-16 (Rep. Oxley). *See* 77 Fed. Reg. 9,321-22; 76 Fed. Reg. 24,978. Others insisted that the harms from power plant emissions warranted mandatory and expeditious control. *E.g.*, Leg. Hist. at 871-872 (Sen. Durenberger). *See* 77 Fed. Reg. 9,322.

The text of subparagraph 7412(n)(1)(A) reflects that compromise. EPA was to study the "hazards to public health reasonably anticipated to occur as a result of emissions by [power plants]" of hazardous air pollutants "after imposition of the requirements of this chapter." But after considering the results of this study, EPA was compelled to regulate power plants under section 7412, if the Administrator "f[ound]" such regulation "appropriate and necessary." *Id. See also* 77 Fed. Reg. 9,335. Notably, even opponents of immediate regulation understood that EPA's decision would be based on "the *scientific* evidence." Leg. Hist. at 1,416 (Rep. Oxley) (emphasis added). *See also id.* at 8,820 (The President's proposal "wisely incorporated a thorough scientific review of the possible health benefit from the utility powerplant regulation for air toxics prior to the imposition of any regulations.") (Sen. Symms).[6]

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[6] Judge Kavanaugh's dissent relied heavily upon Representative Oxley's reference to subparagraph 7412(n)(1)(A) as intended to provide "protection of the public health while avoiding excessive and unnecessary

EPA followed the path Congress laid out in subparagraph 7412(n)(1)(A). EPA determined whether power plants' hazardous emissions harm public health after (and despite) the pollution reductions required under other provisions of the Act. 76 Fed. Reg. 24,990-92. EPA's interpretation of subparagraph 7412(n)(1)(A) afforded power plants a special, industry-specific threshold examination, provided to no other source category, as to: (1) whether emissions from this particular source category posed a public health hazard, *id.* at 24,999-25,017, and (2) whether other programs would adequately abate that hazard, *id.* at 25,017. The multiple peer-reviewed studies in the record painstakingly connecting power plants' emissions to particular health harms testify to the singular status accorded power plants by EPA's reading of subparagraph 7412(n)(1)(A). *See id.* at 24,999-25,017.

But after exhaustive study, EPA found that significant hazards to public health *do* remain. *See supra*, pp. 7-13. Indeed, in 2000, EPA estimated that power plants' emissions of mercury and many other hazardous air pollutants would be *higher* in 2010

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costs." Pet. App. 81a (citing Leg. Hist. 1,417). But even that statement of a sole legislator (*see* 77 Fed. Reg. 9,322) is consistent with understanding subparagraph 7412(n)(1)(A) as providing a regulatory reprieve while EPA conducted a scientific review of projected emissions levels and their health effects, without altering the ways costs are treated under section 7412. Indeed, in the same passage, Rep. Oxley characterized subparagraph 7412(n)(1)(A) as predicating regulation on whether EPA found a "significant risk of serious adverse effects on public health." Leg. Hist. 1,416-17.

than in 1990. 65 Fed. Reg. 79,829 tbl. 1. EPA estimated that mercury emissions would increase from 46 to 60 tons per year, and that arsenic, chromium and hydrogen chloride emissions would also increase. *Id.* The Agency found that power plants were "the largest source of mercury emissions in the U.S.," and that their mercury emissions "are a threat to public health and the environment." *Id.* at 79,827. *See also* 76 Fed. Reg. 24,994.

EPA also found that neither the Acid Rain Program nor other statutory requirements had sufficed to abate those hazards. *E.g.*, 65 Fed. Reg. 79,827; JA106-07. Some suggested, in 1990, that controls for sulfur dioxide and nitrogen oxides might reduce emissions of some air toxics. *See* 76 Fed. Reg. 24,990. But as events unfolded, the dominant Title IV compliance strategy for many coal-burning facilities was switching to low-sulfur coal or purchasing emissions allowances, rather than installing such controls. *See* JA 117-18 (Utility Study's finding that 80 percent of units surveyed had complied with Acid Rain Program by switching to lower-sulfur coal (53%) or purchasing additional allowances (27%)); David Spence, *Coal-Fired Power in a Restructured Electricity Market*, 15 Duke Envtl. L. & Pol'y F. 187, 197 (2005). And what controls were installed proved ineffective to reduce mercury and other hazardous pollutants, JA 106-7. Furthermore, in the decades after subparagraph 7412(n)(1)(A)'s enactment, a more robust scientific understanding developed demonstrating that toxic emissions from power plants pose serious health harms. 76 Fed. Reg. 24,999-25,016.

Had EPA concluded that power plants' emissions were not "reasonably anticipated" to present "hazards to public health" following imposition of other statutory requirements—a possibility contemplated by some legislators in 1990—the Agency would have determined that regulating power plants under section 7412 was not "appropriate and necessary." (As noted, EPA did so conclude as to gas-fired units, *supra*, n.1). EPA in fact carried out, and heeded the results of, the special, source category-specific fact-finding exercises that the provision requires. That the *results* of EPA's extensive inquiries pointed in favor of regulating power plants does not mean that EPA failed to give plant-owners the full benefit of the legislative compromise that subparagraph 7412(n)(1)(A) represents.

Michigan's complaint that EPA read the statute to require regulation "no matter how slight the hazard," Michigan Br. 13, is not remotely accurate. In exercising its judgment under subsection 7412(n)(1)(A) EPA considered: "the nature and severity of the health effects associated with exposure"; "the degree of confidence in our knowledge of those health effects"; "the size and characteristics of the populations affected by exposures"; "the magnitude and breadth of the exposures"; and how exposures to emissions from a "particular source category ... contribute to risk in populations with additional exposures ... from other sources." 76 Fed. Reg. 24,992. *See also* 77 Fed. Reg. 9,334-36 (summarizing EPA's detailed analysis of harms from power plant emissions).

After an exhaustive review of the science, EPA affirmed that it had identified *substantial* risks to the

public. 77 Fed. Reg. 9,323. *Cf. American Trucking*, 531 U.S. at 495-96 (Breyer, J., concurring). Based upon this extensive evidence on health effects, as well the enormous "magnitude" of toxic emissions from coal- and oil-fired power plants, 77 Fed. Reg. 9,363, EPA determined that those emissions "pose a hazard to public health," *id.* at 9,366, and that this hazard is "serious," *id. at* 9,304, 9,310-11.

III. EPA's Interpretation Does Not Lead to Unreasonable or Absurd Results.

A. EPA's Interpretation Does Not Permit Absurd Results.

Petitioners are notably reticent about how EPA *should* have performed the unique, novel, and statutorily unguided analysis of costs they claim was required; rather, their briefs are largely directed at a hypothetical pollution rule with little or no public benefits, but exorbitant costs. Petitioners hypothesize that EPA might, under its interpretation of the statute, impose regulations "if the costs were $9.6 billion per year and the benefits were only $1." Michigan Br. 47. But EPA's interpretation leads to no such absurdly unbalanced results.

First, such results are precluded by EPA's interpretation of subparagraph 7412(n)(1)(A), as triggering regulation only when the Agency finds a public health 'hazard'—a term EPA understood to demand inquiry into "severity" and "magnitude." 76 Fed. Reg. 24,992. EPA's threshold inquiry found substantial public health harms, including "about 580,000 women" of child-bearing age with blood mercury levels sufficient to endanger a developing fetus. 76 Fed. Reg. 24,995. *See id.* at 25,007-11

(finding that power plants were substantial contributors to these levels). Congress saw no absurdity in regulating based upon such harms. Leg. Hist. 3,178 (noting need for action against toxics damaging "the brain or other parts of the nervous system"). *See also* 42 U.S.C. 7412(a)(1), (c)(9).

Second, EPA applied the normal subsection 7412(d) standard-setting criteria to power plants, criteria Congress crafted to avoid "wildly out of balance" outcomes, UARG Br. 42. Petitioners' hypothetical assumes the unlikely scenario that 12 percent or more of sources are already achieving emissions reductions that would be cost-prohibitive for other units of the same class, type, and size to achieve. *See* 42 U.S.C. 7412(d)(3). Petitioners fail to show that this standard-setting regime, which has now been applied across the length and breadth of the industrial economy—from steel mills to lead smelters, refineries to rubber plants, chemical factories to industrial boilers—has, in fact, resulted in irrational or wildly unbalanced costs. *See* 77 Fed. Reg. 9,335 (noting that EPA has promulgated standards for more than 170 source categories under section 7412).

B. The Rule Is Not Evidence of an Unreasonable Interpretation.

The only concrete example petitioners offer is their oft-repeated assertion that the Air Toxics Rule itself creates benefits totaling a mere "$4-$6 million," while imposing costs of "$9.6 billion annually." UARG Br. 42. That is a gross mischaracterization of the Rule's consequences. The record squarely indicates that the Rule produces massive reductions in air toxics, providing correspondingly large health benefits. *See supra*, pp. 9-13.

Petitioners perform two sleights of hand in trying to make those enormous public health benefits disappear. First, although EPA found in its Regulatory Impact Analysis that the subset of pollution-control benefits to which it could affix a dollar figure were worth between $33 and 90 billion—dwarfing the expense of compliance, 77 Fed. Reg. 9,432 tbl. 10—petitioners dismiss most of these benefits as "irrelevant" on the basis that they are "co-benefits," *i.e.*, benefits not directly tied to hazardous air pollutants (such as some benefits of reducing toxic-metal-bearing particulates), Michigan Br. 47-48. But taking account of co-benefits is the standard and sensible practice in cost-benefit analysis. *E.g.*, Office of Management and Budget, *Circular A-4* 26 (2003). Petitioners fail to show why "common-sense" (Michigan Br. 30) would ignore real-world benefits like avoiding thousands of premature deaths and hundreds of thousands of sick days. *See* 77 Fed. Reg. 9,429 tbl. 9.

Equally baseless is petitioners' effort to dismiss all public health benefits to which EPA could not assign monetary value. Claims that the Rule yields only "minimal" public health benefits (Michigan Br. 46) depend upon treating the extremely limited extent to which EPA could monetize benefits from mercury reductions as the Rule's sole cognizable value, and assigning *no value at all* to vast reductions in overall national emissions of numerous other toxics that Congress enacted Section 7412 to abate. *See supra*, pp. 9-13.

The "mere $4-$6 *million* per year" (NMA Br. 1) was, again, part of EPA's Regulatory Impact Analysis under Executive Branch guidance, and, as EPA

explained, reflects only a single narrow dimension of the harms caused by just one of the pollutants (mercury)—the "foregone future earnings" for someone who suffers a reduction in intelligence quotient (IQ) from mercury poisoning as a child. D.C. Cir. JA 2346. EPA, however, explained that this estimate greatly underrepresented mercury's true harms. 77 Fed. Reg. 9,313, 9,353 (noting that IQ loss fails to capture all effects of mercury poisoning). *See also* JA 813 (Science Advisory Board's observation that IQ loss is an "insensitive indicator of methylmercury neurobehavioral impacts," one that "could underestimate risk").

And even as to IQ loss, the monetized benefits did not remotely purport to describe the full harm. An estimate of lost income ($893 to $11,859 per IQ point, D.C. Cir. JA 2347-48) does not capture the consequences of permanent, lifelong intelligence loss damage starting in early childhood or in utero—just one example of the sort of profound methodological limitations that led Congress to relieve EPA of the responsibility of a threshold weighing of costs against benefits. *See supra,* pp. 4, 16-29; *see also, e.g.,* JA 951-52 (discussing "methodology and data limitations" that led EPA to employ "qualitative analysis" rather than "monetization of reductions in cancer incidences").

EPA explained that benefits to the public from reductions in hazardous air pollutants "could be substantial," JA 914, though EPA could not assign most of them a monetary value. Nothing in the Act requires EPA to perform the often impossible task of "monetizing" the public benefits from reducing hazardous air pollutants. EPA's extensive and

detailed *qualitative* assessment of the harms resulting from power plants' toxic emissions, *e.g.*, 76 Fed. Reg. 24,988-25,020—especially combined with its identification of "successfully demonstrated" technologies to reduce that harm, *id.* at 25,014—reasonably ensured that the regulatory process would serve the ends identified by Congress. *See Entergy*, 556 U.S. at 235 (Breyer, concurring) (agency may "describe environmental benefits in non-monetized terms" and thereby "avoid lengthy formal cost-benefit proceedings and futile attempts at comprehensive monetization").[7]

The public health gains this rule will achieve—and in particular those from its dramatic reduction in *overall national emissions* of pollutants such as mercury, chromium, cadmium, nickel and hydrochloric acid gas—place it among the most important air pollution regulations this country has adopted. A "reasonable person" (Michigan Br. 47) *would* choose to spend significant sums to achieve, large, otherwise unattainable reductions in emissions of a variety of dangerous, congressionally-designated contaminants, as the Air Toxics Rule does. And the

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[7] The Court did not grant certiorari on whether EPA should have exempted acid gases like hydrochloric acid and hydrogen cyanide, *see* NMA Br. 42-44. In any event, that contention lacks merit. Subparagraph 7412(n)(1)(A) specifies that regulation proceed "under this section," and paragraphs 7412(d)(1) & (2) require that EPA set emissions standards for each listed hazardous pollutant. *See Sierra Club v. EPA*, 479 F.3d 875, 883 (D.C. Cir. 2007). Contrary to petitioner's suggestion, acid gases pose acute and chronic threats to public health. *See* 76 Fed Reg. 25,050-51.

1990 Congress made that choice, mandating regulation of sources spanning the whole economy without requiring any prior tally of "monetized benefits," or any threshold assessment of compliance costs.

The most reasonable reading of subparagraph 7412(n)(1)(A)—certainly a permissible one under *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984) —is that Congress wanted the Administrator to decide, based on careful review of the evidence, whether power plant emissions pose a hazard to the public, and, if so, to regulate them "under [section 7412]," with its carefully crafted provisions for securing "achievable" reductions in light of costs and existing industry practice.

CONCLUSION

The judgment of the court of appeals should be affirmed.

Respectfully submitted.

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